

118TH CONGRESS  
2D SESSION

# S. 4615

To amend title VI of the Public Utility Regulatory Policies Act of 1978 to establish a Federal energy efficiency resource standard for electricity and natural gas suppliers, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

JUNE 20, 2024

Ms. SMITH (for herself, Mr. WELCH, Mr. BOOKER, Mr. LUJÁN, Mrs. SHAHEEN, and Mr. VAN HOLLEN) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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## A BILL

To amend title VI of the Public Utility Regulatory Policies Act of 1978 to establish a Federal energy efficiency resource standard for electricity and natural gas suppliers, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “American Energy Effi-  
5 ciency Act of 2024”.

1 **SEC. 2. ENERGY EFFICIENCY RESOURCE STANDARD FOR**  
 2 **RETAIL ELECTRICITY AND NATURAL GAS**  
 3 **SUPPLIERS.**

4 (a) IN GENERAL.—Title VI of the Public Utility Reg-  
 5 ulatory Policies Act of 1978 is amended by adding after  
 6 section 609 (7 U.S.C. 918c) the following:

7 **“SEC. 610. FEDERAL ENERGY EFFICIENCY RESOURCE**  
 8 **STANDARD FOR RETAIL ELECTRICITY AND**  
 9 **NATURAL GAS SUPPLIERS.**

10 “(a) DEFINITIONS.—In this section:

11 “(1) AFFILIATE.—The term ‘affiliate’, when  
 12 used in relation to a person (including an electric  
 13 utility and a local distribution company), means an-  
 14 other person that owns or controls, is owned or con-  
 15 trolled by, or is under common ownership or control  
 16 with, that person, as determined under regulations  
 17 promulgated by the Secretary.

18 “(2) ASHRAE; ANSI; IESNA.—The terms  
 19 ‘ASHRAE’, ‘ANSI’, and ‘IESNA’ mean the Amer-  
 20 ican Society of Heating, Refrigerating and Air-Con-  
 21 ditioning Engineers, the American National Stand-  
 22 ards Institute, and the Illuminating Engineering So-  
 23 ciety of North America, respectively.

24 “(3) BASE QUANTITY.—

25 “(A) IN GENERAL.—The term ‘base quan-  
 26 tity’, with respect to a retail electricity supplier

1 or retail natural gas supplier, means, for each  
2 calendar year for which a performance standard  
3 is established under subsection (c), the average  
4 annual quantity of electricity or natural gas de-  
5 livered by the retail electricity supplier or retail  
6 natural gas supplier to retail customers during  
7 the 3 calendar years immediately preceding the  
8 first year that compliance is required under  
9 subsection (c)(1).

10 “(B) EXCLUSION.—The term ‘base quan-  
11 tity’, with respect to a retail natural gas sup-  
12 plier, does not include natural gas delivered for  
13 purposes of electricity generation.

14 “(4) CHP SAVINGS.—The term ‘CHP savings’  
15 means—

16 “(A) CHP system savings from a combined  
17 heat and power system that commences oper-  
18 ation after the date of enactment of this sec-  
19 tion; and

20 “(B) the increase in CHP system savings  
21 from upgrading or replacing, after the date of  
22 enactment of this section, a combined heat and  
23 power system that commenced operation on or  
24 before the date of enactment of this section.

1           “(5) CHP SYSTEM SAVINGS.—The term ‘CHP  
2 system savings’ means the electric output, and the  
3 electricity saved due to the mechanical output, of a  
4 combined heat and power system, adjusted to reflect  
5 any increase in fuel consumption by that system as  
6 compared to the fuel that would have been required  
7 to produce an equivalent useful thermal energy out-  
8 put in a separate thermal-only system, as deter-  
9 mined in accordance with regulations promulgated  
10 by the Secretary.

11           “(6) COMBINED HEAT AND POWER SYSTEM.—  
12 The term ‘combined heat and power system’ means  
13 a system that uses the same energy source for the  
14 generation of electrical or mechanical power and the  
15 production of steam or another form of useful ther-  
16 mal energy, if—

17                   “(A) the system meets all applicable re-  
18 quirements relating to efficiency and other op-  
19 erating characteristics that the Secretary pro-  
20 mulgates by regulation; and

21                   “(B) the net quantity of electricity sold  
22 wholesale by the facility using the system does  
23 not exceed 50 percent of the total quantity of  
24 electricity generated annually by the system.

1           “(7) COST-EFFECTIVE.—The term ‘cost-effec-  
2           tive’ means, with respect to an energy efficiency  
3           measure, that the measure achieves, directly to the  
4           energy consumer and to the economy, a net present  
5           value of economic benefits over the life of the meas-  
6           ure that is greater than the net present value of the  
7           cost of the measure over the life of the measure,  
8           using a societal benefit-cost test calculated using the  
9           lower of—

10                   “(A) a utility weighted average cost of cap-  
11                   ital; or

12                   “(B) a social discount rate of 3 percent.

13           “(8) CUSTOMER FACILITY SAVINGS.—The term  
14           ‘customer facility savings’ means a reduction in end-  
15           use electricity or natural gas consumption (including  
16           waste heat energy savings) at a facility of an end-  
17           use consumer of electricity or natural gas served by  
18           a retail electricity supplier or retail natural gas sup-  
19           plier, as compared to—

20                   “(A) in the case of a new facility, con-  
21                   sumption at a reference facility of average effi-  
22                   ciency;

23                   “(B) in the case of an existing facility,  
24                   consumption at the facility during a base period  
25                   of not less than 1 year;

1           “(C) in the case of new equipment that re-  
2           places existing equipment at the end of the use-  
3           ful life of the existing equipment, consumption  
4           by new equipment of average efficiency of the  
5           same equipment type, except that customer sav-  
6           ings under this subparagraph shall not be  
7           counted toward customer savings under sub-  
8           paragraph (A) or (B); and

9           “(D) in the case of new equipment that re-  
10          places existing equipment with remaining useful  
11          life—

12                 “(i) consumption by the existing  
13                 equipment for the remaining useful life of  
14                 the equipment; and

15                 “(ii) thereafter, consumption by new  
16                 equipment of average efficiency of the  
17                 same equipment type.

18          “(9) ELECTRICITY SAVINGS.—The term ‘elec-  
19          tricity savings’ means reductions in electricity con-  
20          sumption or losses achieved through measures imple-  
21          mented after the date of enactment of this section,  
22          as determined in accordance with regulations pro-  
23          mulgated by the Secretary, that—

1           “(A) occur in the service territory of the  
2 retail electricity supplier claiming or transfer-  
3 ring the electricity savings; and

4           “(B) are limited to—

5           “(i) customer facility savings of elec-  
6 tricity, adjusted to reflect any associated  
7 increase in fuel consumption at the facility;

8           “(ii) reductions in distribution system  
9 losses of electricity achieved by a retail  
10 electricity supplier, as compared to losses  
11 attributable to new or replacement dis-  
12 tribution system equipment of average effi-  
13 ciency, as defined in regulations promul-  
14 gated by the Secretary;

15           “(iii) CHP savings;

16           “(iv) State and local codes and stand-  
17 ards savings of electricity; and

18           “(v) fuel-switching energy savings  
19 that result in net savings of source energy,  
20 as defined in regulations promulgated by  
21 the Secretary.

22           “(10) FUEL-SWITCHING ENERGY SAVINGS.—

23           “(A) IN GENERAL.—The term ‘fuel-switch-  
24 ing energy savings’ means net energy savings,  
25 calculated in accordance with subparagraph

1 (B), from end-user switches from 1 energy  
2 source to another, as determined in accordance  
3 with regulations promulgated by the Secretary.

4 “(B) CALCULATION.—For purposes of cal-  
5 culating fuel-switching net energy savings—

6 “(i) electricity use shall be evaluated  
7 based on the average quantity of fuel  
8 burned at a new power plant, taking into  
9 account existing and planned renewable en-  
10 ergy generators to provide each kilowatt  
11 hour of electricity;

12 “(ii) electricity and natural gas use  
13 shall include losses in the transmission and  
14 distribution system; and

15 “(iii) fuel-switching that is not cost-ef-  
16 fective to the end-user shall not be count-  
17 ed.

18 “(11) LOCAL DISTRIBUTION COMPANY.—The  
19 term ‘local distribution company’ has the meaning  
20 given the term in section 2 of the Natural Gas Pol-  
21 icy Act of 1978 (15 U.S.C. 3301).

22 “(12) NATURAL GAS SAVINGS.—The term ‘nat-  
23 ural gas savings’ means reductions in natural gas  
24 consumption, leakage, or operational losses from  
25 measures implemented after the date of enactment



1 of this section, as determined in accordance with  
2 regulations promulgated by the Secretary, that—

3 “(A) occur in the service territory of the  
4 retail natural gas supplier claiming or transfer-  
5 ring the natural gas savings; and

6 “(B) are limited to—

7 “(i) customer facility savings of nat-  
8 ural gas, adjusted to reflect any associated  
9 increase in electricity consumption or con-  
10 sumption of other fuels at the facility;

11 “(ii) reductions in leakage, operational  
12 losses, and consumption of natural gas fuel  
13 to operate a gas distribution system,  
14 achieved by a retail natural gas supplier,  
15 as compared to similar leakage, losses, and  
16 consumption during a base period of not  
17 less than 1 year;

18 “(iii) State and local codes and stand-  
19 ards savings of natural gas; and

20 “(iv) fuel-switching energy savings  
21 that result in net savings of source energy,  
22 as defined in regulations promulgated by  
23 the Secretary.

24 “(13) PERFORMANCE STANDARD.—

1           “(A) IN GENERAL.—The term ‘perform-  
2           ance standard’ means a standard established  
3           for a calendar year for cumulative electricity  
4           savings or cumulative natural gas savings that  
5           is expressed as a percentage of base quantity.

6           “(B) CALENDAR YEARS 2025 THROUGH  
7           2039.—For each of calendar years 2025 through  
8           2039, the term ‘performance standard’ means  
9           the percentage labeled as cumulative electricity  
10          savings percentage or cumulative natural gas  
11          savings percentage, as applicable, in the table in  
12          subsection (c)(2) for the applicable calendar  
13          year.

14          “(14) POWER POOL.—

15                 “(A) IN GENERAL.—The term ‘power pool’  
16                 means an association of 2 or more inter-  
17                 connected electric systems that have entered  
18                 into an agreement to coordinate operations and  
19                 planning for improved reliability and effi-  
20                 ciencies, as determined by the Secretary.

21                 “(B) INCLUSIONS.—The term ‘power pool’  
22                 includes a Regional Transmission Organization  
23                 (as defined in section 3 of the Federal Power  
24                 Act (16 U.S.C. 796)) and an Independent Sys-  
25                 tem Operator (as defined in that section).

1           “(15) REPORTING PERIOD.—The term ‘report-  
2           ing period’ means—

3                   “(A) calendar year 2025; and

4                   “(B) each successive 2-calendar-year pe-  
5           riod thereafter.

6           “(16) RETAIL ELECTRICITY SUPPLIER.—

7                   “(A) IN GENERAL.—The term ‘retail elec-  
8           tricity supplier’ means, for any given calendar  
9           year, an electric utility that delivers not less  
10          than 2,000,000 megawatt hours of electric en-  
11          ergy to electric consumers for purposes other  
12          than resale during the preceding calendar year.

13                   “(B) INCLUSIONS AND LIMITATIONS.—For  
14          purposes of determining whether an electric  
15          utility qualifies as a retail electricity supplier  
16          under subparagraph (A)—

17                   “(i) deliveries by any affiliate of an  
18          electric utility to electric consumers for  
19          purposes other than resale shall be consid-  
20          ered to be deliveries by the electric utility;  
21          and

22                   “(ii) deliveries by any electric utility  
23          to a lessee, tenant, or affiliate of the elec-  
24          tric utility shall not be considered to be de-  
25          liveries to electric consumers.

1 “(17) RETAIL NATURAL GAS SUPPLIER.—

2 “(A) IN GENERAL.—The term ‘retail nat-  
3 ural gas supplier’ means, for any given calendar  
4 year, a local distribution company that delivered  
5 to natural gas consumers more than  
6 5,000,000,000 cubic feet of natural gas for pur-  
7 poses other than resale during the preceding  
8 calendar year.

9 “(B) INCLUSIONS AND LIMITATIONS.—For  
10 purposes of determining whether an entity  
11 qualifies as a retail natural gas supplier under  
12 subparagraph (A)—

13 “(i) deliveries of natural gas by any  
14 affiliate of a local distribution company to  
15 consumers for purposes other than resale  
16 shall be considered to be deliveries by the  
17 local distribution company; and

18 “(ii) deliveries of natural gas to a les-  
19 see, tenant, or affiliate of a local distribu-  
20 tion company shall not be considered to be  
21 deliveries to natural gas consumers.

22 “(18) STATE AND LOCAL CODES AND STAND-  
23 ARDS SAVINGS.—

24 “(A) IN GENERAL.—The term ‘State and  
25 local codes and standards savings’ means a re-

1           duction, due to the adoption and implementa-  
2           tion, after the date of enactment of this section,  
3           of new or revised appliance and equipment effi-  
4           ciency standards or building energy codes, in—

5                   “(i) end-use electricity consumption  
6                   for a retail electricity supplier; or

7                   “(ii) natural gas consumption in the  
8                   service territory of a retail natural gas  
9                   supplier.

10           “(B) BASELINES.—In calculating State  
11           and local codes and standards savings under  
12           subparagraph (A)—

13                   “(i) the baseline for calculating sav-  
14                   ings from a new or revised building code  
15                   shall be the more stringent of—

16                           “(I)(aa) the 2021 International  
17                           Energy Conservation Code for resi-  
18                           dential buildings; or

19                           “(bb) the ASHRAE/ANSI/  
20                           IESNA Standard 90.1–2019 for com-  
21                           mercial buildings; or

22                           “(II) the applicable State build-  
23                           ing code in effect on the date of en-  
24                           actment of this section; and

1           “(ii) the baseline for calculating sav-  
2           ings from a new or revised appliance  
3           standard shall be the estimated average ef-  
4           ficiency of new appliances in the applicable  
5           1 or more categories during the 1-year pe-  
6           riod preceding the date on which the new  
7           or revised standard is adopted.

8           “(19) THIRD-PARTY EFFICIENCY PROVIDER.—  
9           The term ‘third-party efficiency provider’ means any  
10          retailer, building owner, energy service company, fi-  
11          nancial institution, or other commercial, industrial,  
12          or nonprofit entity that is capable of providing elec-  
13          tricity savings or natural gas savings in accordance  
14          with any procedures, standards, and rules estab-  
15          lished by the Secretary under subsections (b)(1)(D)  
16          and (e).

17          “(20) WASTE HEAT ENERGY SAVINGS.—The  
18          term ‘waste heat energy savings’ means a reduction  
19          in the mechanical or thermal energy used at a facil-  
20          ity or the electric output of a facility, adjusted to re-  
21          flect any associated increase in fuel consumption,  
22          that results from a modification of an industrial,  
23          commercial, or institutional system that commenced  
24          operation before the date of enactment of this sec-  
25          tion, in order to recapture electrical, mechanical, or

1 thermal energy that would otherwise be wasted, such  
2 as through exhaust or dissipation to the environ-  
3 ment, and productively use that recaptured energy,  
4 represented as a reduction in net electricity or nat-  
5 ural gas consumption, as determined in accordance  
6 with regulations promulgated by the Secretary.

7 “(b) ESTABLISHMENT OF PROGRAM.—

8 “(1) REGULATIONS.—Not later than 1 year  
9 after the date of enactment of this section, the Sec-  
10 retary shall, by regulation, establish a program to  
11 implement and enforce the requirements of this sec-  
12 tion, including—

13 “(A) by establishing evaluation, measure-  
14 ment, and verification procedures and stand-  
15 ards under subsection (e);

16 “(B) by establishing requirements under  
17 which retail electricity suppliers and retail nat-  
18 ural gas suppliers shall—

19 “(i) demonstrate, document, and re-  
20 port the compliance of the retail electricity  
21 suppliers and retail natural gas suppliers  
22 with the performance standards under sub-  
23 section (e); and

24 “(ii) estimate the impact of the stand-  
25 ards on current and future electricity and

1 natural gas use in the service territories of  
2 the suppliers;

3 “(C) by establishing requirements gov-  
4 erning applications for, and implementation of,  
5 delegated State administration under subsection  
6 (g); and

7 “(D) by establishing rules to govern trans-  
8 fers of electricity savings and natural gas sav-  
9 ings—

10 “(i) between suppliers and third-party  
11 efficiency providers serving the same State;  
12 and

13 “(ii) between suppliers and third-  
14 party efficiency providers serving different  
15 States.

16 “(2) NATIONAL ACADEMY OF SCIENCES  
17 STUDY.—In establishing and implementing the pro-  
18 gram under this section, the Secretary shall take  
19 into consideration a report published under sub-  
20 section (e)(2)(C).

21 “(3) COORDINATION WITH STATE PROGRAMS.—  
22 In establishing and implementing the program under  
23 this section, the Secretary shall, to the maximum ex-  
24 tent practicable, preserve the integrity and incor-



1 porate best practices of existing State energy effi-  
2 ciency programs.

3 “(4) SAVINGS PROGRAMS FOR LOW-INCOME  
4 CUSTOMERS.—In implementing this section, the Sec-  
5 retary shall encourage retail electricity suppliers and  
6 retail natural gas suppliers to ensure that a portion  
7 of the customer facility savings achieved for a cal-  
8 endar year shall result from programs that target  
9 households that are at or below 200 percent of the  
10 poverty line (as defined in section 673 of the Com-  
11 munity Services Block Grant Act (42 U.S.C. 9902)).

12 “(c) PERFORMANCE STANDARDS.—

13 “(1) COMPLIANCE OBLIGATION.—Not later  
14 than May 1 of the calendar year immediately fol-  
15 lowing each reporting period—

16 “(A) each retail electricity supplier shall  
17 submit to the Secretary a report, in accordance  
18 with regulations promulgated by the Secretary,  
19 demonstrating that the retail electricity supplier  
20 has achieved cumulative consistent electricity  
21 savings (adjusted to account for any attrition of  
22 savings measures implemented in prior years)  
23 in each calendar year that are equal to the ap-  
24 plicable percentage of the base quantity of the  
25 retail electricity supplier; and

1           “(B) each retail natural gas supplier shall  
 2           submit to the Secretary a report, in accordance  
 3           with regulations promulgated by the Secretary,  
 4           demonstrating that the retail natural gas sup-  
 5           plier has achieved cumulative consistent natural  
 6           gas savings (adjusted to account for any attri-  
 7           tion of savings measures implemented in prior  
 8           years) in each calendar year that are equal to  
 9           the applicable percentage of the base quantity  
 10          of the retail natural gas supplier.

11           “(2) STANDARDS FOR 2025 THROUGH 2039.—  
 12          For each of calendar years 2025 through 2039, the  
 13          applicable percentages are as follows:

“Calendar Year	Cumulative Electricity Savings Percentage	Cumulative Natural Gas Savings Percentage
2025	1.00	0.50
2026	2.00	1.25
2027	3.00	2.00
2028	4.25	3.00
2029	5.50	4.00
2030	7.00	5.00
2031	8.50	6.00
2032	10.00	7.00
2033	11.50	8.00
2034	13.00	9.00
2035	14.75	10.00
2036	16.50	11.00
2037	18.25	12.00
2038	20.00	13.00

“Calendar Year	Cumulative Electricity Savings Percentage	Cumulative Natural Gas Savings Percentage
2039	22.00	14.00

1 “(3) SUBSEQUENT YEARS.—

2 “(A) CALENDAR YEARS 2040 THROUGH  
3 2049.—Not later than December 31, 2034, the  
4 Secretary shall promulgate regulations estab-  
5 lishing performance standards (expressed as ap-  
6 plicable percentages of base quantity for both  
7 cumulative electricity savings and cumulative  
8 natural gas savings) for each of calendar years  
9 2040 through 2049.

10 “(B) REQUIREMENTS.—The Secretary  
11 shall establish standards under this paragraph  
12 at levels reflecting the maximum achievable  
13 level of cost-effective energy efficiency potential,  
14 taking into account—

15 “(i) cost-effective energy savings  
16 achieved by leading retail electricity sup-  
17 pliers and retail natural gas suppliers;

18 “(ii) opportunities for new State and  
19 local codes and standards savings;

20 “(iii) technology improvements; and

21 “(iv) other indicators of cost-effective  
22 energy efficiency potential, including dif-  
23 ferences between States.

1           “(C) MINIMUM PERCENTAGE.—In no case  
2 shall the applicable percentages for any cal-  
3 endar year after calendar year 2039 be less  
4 than the applicable percentages for calendar  
5 year 2039.

6           “(4) MIDCOURSE REVIEW AND ADJUSTMENT OF  
7 PERFORMANCE STANDARDS.—

8           “(A) IN GENERAL.—Not later than De-  
9 cember 31, 2033, and at 10-year intervals  
10 thereafter, the Secretary shall—

11           “(i) review the most recent perform-  
12 ance standards established under para-  
13 graph (2) or (3), as applicable; and

14           “(ii) increase the performance stand-  
15 ards by regulation if the Secretary deter-  
16 mines that additional cost-effective energy  
17 efficiency potential is achievable, taking  
18 into account the requirement described in  
19 paragraph (3)(C).

20           “(B) LEAD TIME.—If the Secretary revises  
21 performance standards under this paragraph,  
22 the applicable regulations shall provide ade-  
23 quate lead time to ensure that compliance with  
24 the increased performance standards is feasible.

1           “(5) DELAY OF SUBMISSION FOR FIRST RE-  
2           PORTING PERIOD.—

3           “(A) IN GENERAL.—Notwithstanding  
4           paragraphs (1) and (2), for the first reporting  
5           period after the date of enactment of this sec-  
6           tion, the Secretary may accept a request from  
7           a retail electricity supplier or a retail natural  
8           gas supplier to delay the required submission of  
9           documentation of all or part of the required  
10          savings for up to 2 years.

11          “(B) PLAN FOR COMPLIANCE.—The re-  
12          quest for delay under subparagraph (A) shall  
13          include a plan for coming into full compliance  
14          by the end of the second reporting period after  
15          the date of enactment of this section.

16          “(6) APPLYING UNUSED SAVINGS TO FUTURE  
17          YEARS.—If savings achieved in a year exceed the  
18          performance standards specified in this subsection,  
19          any savings in excess of the performance standards  
20          may be applied toward performance standards speci-  
21          fied for the first 3 years following the year in which  
22          the excess savings are achieved.

23          “(d) TRANSFERS OF ELECTRICITY SAVINGS AND  
24          NATURAL GAS SAVINGS.—

1           “(1) BILATERAL CONTRACTS FOR SAVINGS  
2 TRANSFERS.—Subject to the limitations of this sub-  
3 section, a retail electricity supplier or retail natural  
4 gas supplier may use electricity savings or natural  
5 gas savings purchased pursuant to a bilateral con-  
6 tract from another retail electricity supplier or retail  
7 natural gas supplier, a State, or a third-party effi-  
8 ciency provider to meet the applicable performance  
9 standard under subsection (c).

10           “(2) REQUIREMENTS.—Electricity savings or  
11 natural gas savings purchased and used for compli-  
12 ance under this subsection shall be—

13                   “(A) measured and verified in accordance  
14 with subsection (e);

15                   “(B) reported in accordance with sub-  
16 section (c); and

17                   “(C) achieved within the same power pool  
18 as is served by the applicable retail electricity  
19 supplier or retail natural gas supplier.

20           “(3) REGULATORY APPROVAL.—Nothing in this  
21 subsection limits or affects the authority of a State  
22 regulatory authority to require a retail electricity  
23 supplier or retail natural gas supplier that is regu-  
24 lated by the State regulatory authority to obtain the  
25 authorization or approval of the State regulatory au-

1       thority of a contract for transfer of electricity sav-  
2       ings or natural gas savings under this subsection.

3           “(4) LIMITATIONS.—To optimize the achieve-  
4       ment of cost-effective energy efficiency potential, the  
5       Secretary may prescribe such limitations as the Sec-  
6       retary determines appropriate with respect to the  
7       proportion of the compliance obligation of a retail  
8       electricity supplier or retail natural gas supplier  
9       under the applicable performance standards under  
10      subsection (c) that may be met using electricity sav-  
11      ings or natural gas savings that are purchased under  
12      this subsection.

13      “(e)     EVALUATION,     MEASUREMENT,     AND  
14    VERIFICATION OF SAVINGS.—

15           “(1) REGULATIONS.—The regulations promul-  
16      gated pursuant to subsection (b) shall—

17                   “(A) be based on—

18                           “(i) the Uniform Methods Project of  
19                           the Department of Energy;

20                           “(ii) the National Standard Practice  
21                           Manual for Assessing the Cost-Effective-  
22                           ness of Energy Efficiency Resources, devel-  
23                           oped by the National Efficiency Screening  
24                           Project; and

1           “(iii) other best practices recognized  
2           in the energy efficiency industry; and

3           “(B) include—

4           “(i) procedures and standards for  
5           evaluating, measuring, and verifying elec-  
6           tricity savings and natural gas savings that  
7           count toward the performance standards  
8           established under subsection (c) that—

9           “(I) specify the types of energy  
10          efficiency and energy conservation  
11          measures that may be counted;

12          “(II) require that energy con-  
13          sumption estimates for customer fa-  
14          cilities or portions of facilities in the  
15          applicable base and current years be  
16          adjusted, as appropriate, to account  
17          for changes in weather, level of pro-  
18          duction, seasonal patterns, and build-  
19          ing area;

20          “(III) for new customer facilities,  
21          establish a standardized method for  
22          calculating average efficiency that ac-  
23          counts for factors such as weather,  
24          level of production, seasonal patterns,  
25          and building area;



1           “(IV) do not prevent overall load  
2 growth due to beneficial electrifica-  
3 tion;

4           “(V) account for the useful life of  
5 energy efficiency and energy conserva-  
6 tion measures;

7           “(VI) allow for savings from a  
8 program to be estimated based on ex-  
9 trapolation from a representative sam-  
10 ple of participating customers;

11           “(VII) include procedures for cal-  
12 culating and documenting CHP sav-  
13 ings, fuel-switching energy savings,  
14 and waste heat energy savings;

15           “(VIII) establish methods for cal-  
16 culating State and local codes and  
17 standards savings, including the use  
18 of verified compliance rates;

19           “(IX) include procedures for cal-  
20 culating and documenting—

21           “(aa) customer facility sav-  
22 ings and reductions in distribu-  
23 tion system losses of electricity  
24 and natural gas that are achieved  
25 as a result of smart grid deploy-

1                   ment, as described in section  
2                   1301 of the Energy Independ-  
3                   ence and Security Act of 2007  
4                   (42 U.S.C. 17381), or the siting  
5                   of new generation capacity closer  
6                   to the end-use customer; and

7                   “(bb) reductions in natural  
8                   gas distribution system losses at-  
9                   tributable to pipeline repair and  
10                  replacement programs;

11                 “(X) count only measures and  
12                 savings that are additional to busi-  
13                 ness-as-usual customer purchase prac-  
14                 tices;

15                 “(XI) ensure that the retail elec-  
16                 tricity supplier or retail natural gas  
17                 supplier claiming the electricity sav-  
18                 ings or natural gas savings, including  
19                 State and local codes and standards  
20                 savings, has played a significant role  
21                 in achieving the savings (including  
22                 through the activities of a designated  
23                 agent of the supplier or through the  
24                 purchase of transferred electricity sav-  
25                 ings or natural gas savings);

1           “(XII) avoid double-counting of  
2 savings used for compliance with this  
3 section, including transferred savings;

4           “(XIII) include electricity savings  
5 or natural gas savings from programs  
6 administered by retail electricity sup-  
7 pliers or retail natural gas suppliers  
8 that are funded by Federal, State, or  
9 other sources, unless the funding  
10 source specifies otherwise;

11           “(XIV) credit large customer  
12 self-directed electricity savings or nat-  
13 ural gas savings to the retail elec-  
14 tricity supplier or retail natural gas  
15 supplier if the large customer receives  
16 incentives or rate reductions from the  
17 retail electricity supplier or retail nat-  
18 ural gas supplier for self-directed en-  
19 ergy efficiency improvements;

20           “(XV) include guidance, as ap-  
21 propriate, for additional alternative  
22 approaches to evaluate electricity sav-  
23 ings and natural gas savings for large  
24 commercial and industrial customers

1 in energy-intensive industries that are  
2 subject to international competition;

3 “(XVI) include procedures for  
4 counting electricity savings and nat-  
5 ural gas savings achieved by solar  
6 heating and cooling technologies, solar  
7 light pipe technology, geothermal heat  
8 pumps, and other technologies uti-  
9 lizing renewable resources that do not  
10 produce electricity or gaseous fuel and  
11 reduce on-site energy use;

12 “(XVII) include procedures for  
13 counting electricity savings and nat-  
14 ural gas savings achieved by weather-  
15 ization measures, such as installing  
16 mechanical insulation, repairing or re-  
17 placing heating and cooling systems,  
18 repairing or replacing windows and  
19 doors, performing air sealing, and re-  
20 placing lights and appliances with  
21 more energy efficient models;

22 “(XVIII) include procedures for  
23 counting electricity savings and nat-  
24 ural gas savings achieved from in-  
25 creased utilization of mechanical insu-

1 lation for new, retrofit, and mainte-  
2 nance construction for commercial, in-  
3 dustrial, public, and nonprofit build-  
4 ings and facilities;

5 “(XIX) in any State in which the  
6 State regulatory authority has des-  
7 igned 1 or more entities to admin-  
8 ister electric ratepayer-funded effi-  
9 ciency programs approved by the  
10 State regulatory authority, provide  
11 that electricity savings and natural  
12 gas savings achieved through those  
13 programs shall be distributed propor-  
14 tionally among retail electricity sup-  
15 pliers and retail natural gas suppliers;

16 “(XX) include guidance for retail  
17 electricity suppliers and retail natural  
18 gas suppliers to calculate and docu-  
19 ment business-as-usual consumption  
20 projections;

21 “(XXI) include guidance for esti-  
22 mating savings using information  
23 from the database established under  
24 paragraph (3) based on similar meas-  
25 ures and programs in other settings

1 with appropriate adjustments, as nec-  
2 essary; and

3 “(XXII) incorporate advances in  
4 the science of policy evaluation, such  
5 as the use of—

6 “(aa) randomized control  
7 trials;

8 “(bb) other experimental  
9 and quasi-experimental ap-  
10 proaches; and

11 “(cc) large data sets and  
12 machine learning techniques; and

13 “(ii) procedures and standards for  
14 third-party verification of reported elec-  
15 tricity savings or natural gas savings.

16 “(2) NATIONAL ACADEMY OF SCIENCES  
17 STUDY.—Not later than 180 days after the date of  
18 enactment of this section, the Secretary shall seek to  
19 enter into an agreement with the National Academy  
20 of Sciences, under which the Academy shall—

21 “(A) evaluate existing state-of-the-art  
22 methods for evaluating energy efficiency policies  
23 and measures;

1           “(B) identify approaches in program eval-  
2           uation literature that may be brought into the  
3           energy efficiency domain, including—

4                   “(i) randomized control trials and  
5                   other experimental or quasi-experimental  
6                   approaches;

7                   “(ii) control of confounding factors;

8                   “(iii) longitudinal studies;

9                   “(iv) assessments by neutral arbiters;

10                  and

11                   “(v) disclosure of data for replication;

12                  and

13           “(C) not later than 18 months after the  
14           date of enactment of this section, publish a re-  
15           port that includes—

16                   “(i) a description of the evaluation  
17                   under subparagraph (A);

18                   “(ii) a description of the approaches  
19                   identified under subparagraph (B); and

20                   “(iii) recommendations for advancing  
21                   and adopting rigorous state-of-the-art  
22                   methods for evaluating energy efficiency  
23                   policies and measures.

24           “(3) ENERGY EFFICIENCY PROGRAM EVALUA-  
25           TION DATABASE.—

1           “(A) IN GENERAL.—The Secretary shall  
2 establish and maintain a searchable public data-  
3 base, accessible on the website of the Depart-  
4 ment of Energy, that contains a list of random-  
5 ized control trials and other experimental or  
6 quasi-experimental evaluations of energy effi-  
7 ciency programs.

8           “(B) REQUIREMENTS.—Each trial or eval-  
9 uation on the list described in subparagraph  
10 (A) shall include, at a minimum—

11                 “(i) the State in which the trial or  
12 evaluation was conducted;

13                 “(ii) the type of trial or evaluation  
14 conducted;

15                 “(iii) the type of program evaluated;

16                 “(iv) an abstract or summary of the  
17 program evaluated;

18                 “(v) a summary of the trial or evalua-  
19 tion methodology;

20                 “(vi) the revealed energy savings from  
21 the trial or evaluation; and

22                 “(vii) to the extent practicable, the  
23 underlying data used to conduct the trial  
24 or evaluation.

25           “(f) ENFORCEMENT AND JUDICIAL REVIEW.—



1           “(1) REVIEW OF RETAIL SUPPLIER REPORTS.—

2                   “(A) IN GENERAL.—The Secretary shall  
3 review each report submitted to the Secretary  
4 by a retail electricity supplier or retail natural  
5 gas supplier under subsection (c) to verify that  
6 the applicable performance standards under  
7 subsection (c) have been met.

8                   “(B) EXCLUSION.—In determining compli-  
9 ance with the applicable performance standards  
10 under subsection (c), the Secretary shall ex-  
11 clude reported electricity savings or natural gas  
12 savings that are not adequately demonstrated  
13 and documented, in accordance with the regula-  
14 tions promulgated under subsections (b) and  
15 (c).

16           “(2) PENALTY FOR FAILURE TO DOCUMENT  
17 ADEQUATE SAVINGS.—If a retail electricity supplier  
18 or a retail natural gas supplier fails to demonstrate  
19 compliance with an applicable performance standard  
20 under subsection (c), or to pay to the State an appli-  
21 cable alternative compliance payment under sub-  
22 section (g)(4), the Secretary shall assess against the  
23 retail electricity supplier or retail natural gas sup-  
24 plier a civil penalty for each failure in an amount

1 equal to, as adjusted for inflation in accordance with  
2 such regulations as the Secretary may promulgate—

3 “(A) \$100 per megawatt hour of electricity  
4 savings or alternative compliance payment that  
5 the retail electricity supplier failed to achieve or  
6 make, respectively; or

7 “(B) \$10 per million Btu of natural gas  
8 savings or alternative compliance payment that  
9 the retail natural gas supplier failed to achieve  
10 or make, respectively.

11 “(3) OFFSETTING STATE PENALTIES.—The  
12 Secretary shall reduce the amount of any penalty  
13 under paragraph (2) by the amount paid by the rel-  
14 evant retail electricity supplier or retail natural gas  
15 supplier to a State for failure to comply with the re-  
16 quirements of a State energy efficiency resource  
17 standard during the same compliance period.

18 “(4) USE OF PAYMENTS.—

19 “(A) DEFINITION OF COVERED RATE.—In  
20 this paragraph, the term ‘covered rate’ means  
21 the proportion that—

22 “(i) the amount of penalty payments  
23 made by retail electricity suppliers and re-  
24 tail natural gas suppliers in a State under  
25 paragraph (2); bears to

1           “(ii) the total amount of penalty pay-  
2           ments collected by the Secretary under  
3           that paragraph.

4           “(B) USE OF PAYMENTS.—Penalty pay-  
5           ments collected under paragraph (2) by the  
6           Secretary shall be—

7                   “(i) provided to each State at the cov-  
8                   ered rate for the State; and

9                   “(ii) used by the State to implement  
10                  cost-effective energy efficiency programs  
11                  that—

12                           “(I) to the maximum extent prac-  
13                           ticable, achieve electricity savings and  
14                           natural gas savings in the State suffi-  
15                           cient to make up the deficit associated  
16                           with the penalty payments; and

17                           “(II) can be measured and  
18                           verified in accordance with the appli-  
19                           cable procedures and standards estab-  
20                           lished under subsection (e).

21           “(5) ENFORCEMENT PROCEDURES.—The Sec-  
22           retary shall assess a civil penalty, as provided under  
23           paragraph (2), in accordance with the procedures  
24           described in section 333(d) of the Energy Policy and  
25           Conservation Act (42 U.S.C. 6303(d)).

1 “(6) JUDICIAL REVIEW.—

2 “(A) IN GENERAL.—Any person adversely  
3 affected by a final action taken by the Sec-  
4 retary under this section, other than the assess-  
5 ment of a civil penalty, may use the procedures  
6 for review described in section 336(b) of the  
7 Energy Policy and Conservation Act (42 U.S.C.  
8 6306(b)).

9 “(B) REFERENCES.—For purposes of sub-  
10 paragraph (A)—

11 “(i) any reference in section 336(b) of  
12 the Energy Policy and Conservation Act  
13 (42 U.S.C. 6306(b)) to a rule shall be con-  
14 sidered to be a reference to a final action  
15 taken by the Secretary under this section  
16 (including the promulgation of a regula-  
17 tion, if applicable), other than the assess-  
18 ment of a civil penalty; and

19 “(ii) any reference in that section to  
20 the date on which a rule is prescribed shall  
21 be considered to be a reference to the date  
22 on which the applicable final action was  
23 taken.

24 “(g) STATE ADMINISTRATION.—

1           “(1) IN GENERAL.—On receipt of an applica-  
2           tion from the Governor of a State (including the  
3           Mayor of the District of Columbia), the Secretary  
4           may delegate to the State responsibility for admin-  
5           istering this section within the territory of the State  
6           if the Secretary determines that the State will imple-  
7           ment an energy efficiency program that meets or ex-  
8           ceeds the requirements of this section.

9           “(2) SECRETARIAL DETERMINATION.—Not  
10          later than 180 days after the date on which a com-  
11          plete application described in paragraph (1) is re-  
12          ceived by the Secretary, the Secretary shall make a  
13          substantive determination approving or disapproving  
14          the application, after public notice and comment.

15          “(3) ALTERNATIVE MEASUREMENT AND  
16          VERIFICATION PROCEDURES AND STANDARDS.—As  
17          part of an application submitted under paragraph  
18          (1), a State may request to use alternative measure-  
19          ment and verification procedures and standards to  
20          the procedures and standards described in sub-  
21          section (e), if the State demonstrates that the alter-  
22          native procedures and standards provide a level of  
23          accuracy of measurement and verification that are at  
24          least equivalent to the Federal procedures and  
25          standards under that subsection.

1           “(4) ALTERNATIVE COMPLIANCE PAYMENTS.—

2           “(A) IN GENERAL.—As part of an applica-  
3           tion submitted under paragraph (1), a State  
4           may permit retail electricity suppliers or retail  
5           natural gas suppliers to pay to the State, by  
6           not later than May 1 of the calendar year im-  
7           mediately following the applicable reporting pe-  
8           riod, an alternative compliance payment in an  
9           amount equal to, as adjusted for inflation in ac-  
10          cordance with such regulations as the Secretary  
11          may promulgate, not less than—

12                   “(i) \$50 per megawatt hour of elec-  
13                   tricity savings needed to make up any def-  
14                   icit with regard to a compliance obligation  
15                   under the applicable performance stand-  
16                   ard; or

17                   “(ii) \$5 per million Btu of natural gas  
18                   savings needed to make up any deficit with  
19                   regard to a compliance obligation under  
20                   the applicable performance standard.

21           “(B) USE OF PAYMENTS.—Alternative  
22           compliance payments collected by a State under  
23           subparagraph (A) shall be used by the State to  
24           administer the delegated authority of the State

1 under this subsection and to implement cost-ef-  
2 fective energy efficiency programs that—

3 “(i) to the maximum extent prac-  
4 ticable, achieve electricity savings and nat-  
5 ural gas savings in the State sufficient to  
6 make up the deficit associated with the al-  
7 ternative compliance payments; and

8 “(ii) can be measured and verified in  
9 accordance with the applicable procedures  
10 and standards established under subsection  
11 (e).

12 “(5) REVIEW OF STATE ADMINISTRATION.—

13 “(A) PERIODIC REVIEW.—Every 2 years,  
14 the Secretary shall review State administration  
15 of this section for conformance with the re-  
16 quirements of this section in approximately  $\frac{1}{2}$   
17 of the States that have received approval under  
18 this subsection to administer this section, so  
19 that each State shall be reviewed not less fre-  
20 quently than once every 4 years.

21 “(B) REPORT.—To facilitate the review  
22 under subparagraph (A), the Secretary may re-  
23 quire the State to submit a report dem-  
24 onstrating the conformance of the State with  
25 the requirements of this section, including—

1           “(i) reports submitted by retail elec-  
2           tricity suppliers and retail natural gas sup-  
3           pliers to the State demonstrating compli-  
4           ance with applicable requirements;

5           “(ii) the impact of applicable require-  
6           ments on projected electricity and natural  
7           gas demand in the State;

8           “(iii) an accounting of the use of al-  
9           ternative compliance payments by the  
10          State and the resulting electricity savings  
11          and natural gas savings achieved; and

12          “(iv) any other information that the  
13          Secretary determines appropriate.

14          “(C) REVIEW ON PETITION.—Notwith-  
15          standing subparagraph (A), on receipt of a pub-  
16          lic petition containing a credible allegation of a  
17          substantial deficiency of a State energy effi-  
18          ciency program authorized under this sub-  
19          section, the Secretary shall promptly re-review  
20          the State energy efficiency program.

21          “(D) DEFICIENCIES.—

22                 “(i) IN GENERAL.—In completing a  
23                 review under this paragraph, if the Sec-  
24                 retary finds deficiencies, the Secretary  
25                 shall—



1           “(I) notify the State of the defi-  
2           ciencies;

3           “(II) direct the State to correct  
4           the deficiencies; and

5           “(III) require the State to report  
6           to the Secretary on progress made by  
7           not later than 180 days after the date  
8           on which the State receives notice  
9           under subclause (I).

10          “(ii) SUBSTANTIAL DEFICIENCIES.—If  
11          the deficiencies are substantial, the Sec-  
12          retary shall—

13               “(I) disallow the reported elec-  
14               tricity savings or natural gas savings  
15               that the Secretary determines are not  
16               credible due to deficiencies;

17               “(II) re-review the State not  
18               later than 2 years after the date on  
19               which the original review was com-  
20               pleted; and

21               “(III) if substantial deficiencies  
22               remain uncorrected after the review  
23               provided for under subclause (II), re-  
24               voke the authority of the State to ad-  
25               minister this section.

1           “(6) CALLS FOR REVISION OF STATE APPLICA-  
2           TIONS.—As a condition of maintaining the delegated  
3           authority to administer this section, the Secretary  
4           may require a State to submit a revised application  
5           under paragraph (1) if the Secretary has—

6                   “(A) established new or revised perform-  
7                   ance standards under subsection (e);

8                   “(B) promulgated new or substantially re-  
9                   vised measurement and verification procedures  
10                  and standards under subsection (e); or

11                  “(C) otherwise substantially revised the  
12                  Federal program established under this section.

13           “(7) COST RECOVERY, FIXED COST RECOVERY,  
14           AND SHAREHOLDER INCENTIVES.—The Secretary  
15           shall encourage State utility regulatory commissions  
16           to review the rules and regulations of the Commis-  
17           sion to ensure that utilities under the jurisdiction of  
18           the Commission may—

19                   “(A) recover the direct costs of energy effi-  
20                   ciency programs;

21                   “(B)(i) fully recover authorized fixed costs  
22                   from customers, including recovery of revenue  
23                   associated with fixed costs that was lost due to  
24                   annual sales that were lower than forecasted;  
25                   but

1           “(ii) return to customers the revenue asso-  
2           ciated with fixed costs collected in excess of the  
3           authorized amount under clause (i); and

4           “(C) earn a performance-based incentive  
5           for shareholders for the achievement of energy  
6           efficiency standards.

7           “(8) EVALUATION, MEASUREMENT, AND  
8           VERIFICATION INCENTIVES.—The Secretary shall en-  
9           courage States that have delegated authority to ad-  
10          minister this section to provide incentives to retail  
11          electricity suppliers, retail natural gas suppliers, and  
12          third-party efficiency providers to use randomized  
13          control trials and other experimental or quasi-experi-  
14          mental approaches to evaluate energy efficiency  
15          measures and programs within the State.

16          “(h) INFORMATION AND REPORTS.—In accordance  
17          with section 13 of the Federal Energy Administration Act  
18          of 1974 (15 U.S.C. 772), the Secretary may require any  
19          retail electricity supplier, retail natural gas supplier, third-  
20          party efficiency provider, or any other entity that the Sec-  
21          retary determines appropriate, to provide any information  
22          the Secretary determines appropriate to carry out this sec-  
23          tion.

24          “(i) STATE LAW.—Nothing in this section diminishes  
25          or qualifies any authority of a State or political subdivision

1 of a State to adopt or enforce any law or regulation re-  
2 specting electricity savings or natural gas savings, includ-  
3 ing any law or regulation establishing energy efficiency re-  
4 quirements that are more stringent than those under this  
5 section, except that no State law or regulation shall relieve  
6 any person of any requirement otherwise applicable under  
7 this section.”.

8 (b) CONFORMING AMENDMENT.—The table of con-  
9 tents in section 1(b) of the Public Utility Regulatory Poli-  
10 cies Act of 1978 (Public Law 95–617; 92 Stat. 3118) is  
11 amended by adding at the end of the items relating to  
12 title VI the following:

“Sec. 609. Rural and remote communities electrification grants.

“Sec. 610. Federal energy efficiency resource standard for retail electricity and  
natural gas suppliers.”.

